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ABSTRACT

The Special Education Division of the California State Department of Education funded six pilot programs as part of a state-legislated Awareness Program. The goal of the programs was to make nonhandicapped students in grades K-8 aware of the special problems encountered by disabled persons. This study evaluates the effectiveness of the Awareness Program in terms of its impact on participants. Evaluation activities involved site visits, document review, and review of prior evaluations of individual programs. In addition, statewide evaluation questionnaires and program impact data were collected from 1,513 regular students, 135 teachers, and 73 disabled students. Findings indicated that the Awareness Program met its overall goal in significantly increasing student knowledge about disabled persons. Some of the pilot programs achieved a positive change in student attitude toward disabled persons even though the Program as a whole did not show a significant attitude change. Both students and teachers were well aware of physical barriers faced by disabled persons even before their participation in the Awareness Program. There was some evidence, although not definite, that the Awareness Program promoted student and teacher acceptance of disabled persons and had a positive impact on teacher attitude toward disabled persons. (JDD)

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**EVALUATION OF THE EFFECTIVENESS OF THE AWARENESS PROGRAM
UNDER ASSEMBLY BILL 2841/72**

Yungho Kim and Calvin E. Wright

**Prepared for
Special Education Division
California State Department of Education**

August 1987

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Final Project Report

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This project was carried out in accordance with Agreement No. 4174 with the California State Department of Education. Findings, conclusions and opinions expressed in this report are those of the author and they do not reflect the official position of the California State Department of Education nor the sponsoring agency, and no endorsement is implied.

EXECUTIVE SUMMARY

Purpose of the Study

For the past two and a half years, the Special Education Division of the California State Department of Education funded six pilot programs at various locations in the state as part of the Awareness Program established by Assembly Bill 2841. The goal of the program was to make nonhandicapped students aware of the special problems encountered by disabled persons. The purpose of this study was to evaluate the effectiveness of the Awareness Program in terms of its impact on participants.

Method and Study Limitations

To accomplish the purpose of the study, four activities were carried out. Information about the pilot programs was obtained through site visits and document review. Results from the evaluations conducted by individual programs during 1985-86 and 1986-87 were obtained and reviewed. Also, statewide evaluation questionnaires were developed and program impact data were collected from 1,513 regular students, 135 teachers, and 73 disabled students during the spring semester of the 1986-87 school year. Then, the findings from the review of individual program evaluations and those from the analyses of statewide evaluation data were synthesized and interpreted to address major issues of the present study.

Since statewide evaluation data were to be collected in addition to evaluation data needed by the individual programs, the burden on the respondents and the need for their cooperation were critical to the success of this study. Therefore, all statewide evaluation questionnaires used with teachers or students in this study had to be short and easy to administer. Considering the fact that a relatively large number of questions are necessary to reliably measure each of the outcomes of the Awareness Programs (i.e., changes in student attitude, knowledge, etc.), study findings based on the use of such short instruments should be interpreted very cautiously.

Major Findings

1. The Awareness Program met its overall goal, that is, with varying degrees of success all six pilot awareness programs made nonhandicapped students aware of the special problems encountered by disabled persons.
2. The Awareness Program was successful in significantly increasing student knowledge about disabled persons.
3. Some of the pilot programs were able to make a positive change in student attitude toward disabled persons even though the Awareness Program as a whole did not show a significant attitude change.
4. Both students and teachers were well aware of physical barriers faced by disabled persons even before their participation in the Awareness Program.
5. There was some evidence, although not definite, that the Awareness Program promoted student and teacher acceptance of disabled persons.

6. There was some evidence that the Awareness Program had a positive impact on teacher attitude toward disabled persons even though the data in this area were very limited.
7. There was insufficient evidence to determine if the Awareness Program was effective in improving the peer status or self-esteem of disabled students.

Recommendations

1. Since the Awareness Program has proven to be effective in meeting its overall goal, it is recommended that the program be disseminated to other schools and districts in the state.
2. There is a large variation among the six pilot programs in terms of program emphasis, duration, and delivery method. Since all of them were able to meet at least the overall goal of the Awareness Program, it is recommended that several options be given to prospective program adopters rather than limiting the choice to one or two.
3. In selecting pilot programs for possible statewide dissemination, it is recommended that state staff consider several factors such as the quality of materials, ease of replication, and cost, in addition to program effectiveness.
4. It is recommended that, in the dissemination phase of the Awareness Program, a statewide evaluation be carried out in order to study the effectiveness of individual awareness programs being disseminated as well as the overall effectiveness of the statewide dissemination effort.
5. It is also recommended that more definite guidelines and assistance be provided to the staff of individual awareness programs if they are required to carry out their own program evaluations in the future.

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INTRODUCTION

Background

Early in 1985 the Special Education Division of the California State Department of Education funded six pilot programs at various locations in the state as part of an awareness training program established by Assembly Bill 2841 (1984) and amended by Assembly Bill 72 (1985). The Awareness Program was to make nonhandicapped students aware of the special problems encountered by individuals with exceptional needs, and how those individuals overcome their problems. The purposes of the Awareness Program were: (a) to impart knowledge about individuals with exceptional needs; (b) to minimize the isolation of individuals with exceptional needs by breaking down barriers created by lack of understanding, fear, and curiosity; (c) to increase the awareness of nonhandicapped pupils and teachers regarding physical barriers faced by individuals with exceptional needs; and (d) to demonstrate ways to increase the peer status and self-esteem of the disabled student.

In the first year of the Awareness Program, the activities carried out by each of the six pilot programs were very limited mainly because of the short period of time (about three months) that program staff had before the end of the 1984-85 school year. With the beginning of the 1985-86 school year, all six programs started full operation. State funds provided for the individual programs were approximately \$35,000 per year.

Purpose of the Study

The purpose of this study was to evaluate the effectiveness of the Awareness Program established by Assembly Bill 2841. The evaluation study was to cover a period of two years (1985-86 and 1986-87). The specific objectives of the study were to determine the effect of the program in the following areas:

1. Change in student knowledge about disabled persons.
2. Change in student acceptance of disabled persons.
3. Change in student attitude toward disabled persons.
4. Change in student awareness of physical barriers faced by disabled persons.
5. Change in teacher understanding and acceptance of disabled persons.
6. Change in teacher attitude toward disabled persons.

7. Change in teacher awareness of physical barriers faced by disabled persons.
8. Change in the peer status or self-esteem of disabled students.

This study will meet the legislative requirement of evaluating the Awareness Program. Current legislation provides for the program to remain in effect only until June 30, 1988. The outcome of this study will provide some valuable information to the State Department of Education that can be used for further dissemination of the Awareness Program to other schools and districts in the state.

Limitations of the Evaluation Findings

1. Since this study was initiated in September of 1986, the only evaluation data available for the 1985-86 school year were data collected by the six individual programs for their own evaluations. No two programs used the same data collection instruments in 1985-86.
2. Statewide effectiveness data were collected from participating students and teachers using instruments developed by Educational Evaluation and Research, Inc. (EERI). However, the data were only from program participants in the 1986-87 spring semester. Because of the developmental nature of the pilot programs, program effectiveness may vary between semesters or between school years. Ideally, the data should have been collected from program participants in both the fall and spring semesters for 1985-86 and 1986-87.
3. Since statewide effectiveness data were to be collected in addition to evaluation data needed by the individual programs, the burden on the respondents and the need for their cooperation were critical to the success of this study. Therefore, all statewide evaluation instruments used with teachers or students in this study had to be short and easy to administer.
4. Considering the fact that a relatively large number of questions are necessary to reliably measure each of the outcomes of the Awareness Program (i.e., changes in student attitude, knowledge, etc.), study findings based on the use of such short instruments should be interpreted very cautiously.

METHOD

Overview

In order to attain the objectives of this evaluation study, four major activities were carried out. They were: obtain and review information about the pilot programs; develop data collection plans and instrumentation; collect evaluation data and information; and analyze and synthesize data and information.

The general approach to this study was to fully utilize evaluation data already collected by the six pilot programs, collect and analyze the minimally necessary amount of additional data to fill any gaps, then synthesize all findings to address the objectives of the present study. This approach was necessary because: (a) individual programs had been encouraged by the state to annually evaluate their own performance; (b) this external evaluation was initiated in the third year of a three-year program; and (c) the study budget was very limited.

Obtain and Review Available Information about the Programs

The initial planning and coordination meeting was held on September 15, 1986, with the State Department of Education (SDE) project monitor and with staff members of the Special Education Division who were responsible for the Awareness Program. Copies of the six pilot program proposals were obtained. The proposals were reviewed and a site visit instrument was developed. An initial visit was made in November to each program site to find out about the status of the program and to obtain information and available documents. During this site visit, detailed information was obtained about the internal monitoring and evaluation plan of the program as well as about the evaluation data already collected.

Develop Data Collection Plans and Instrumentation

Based on a review of the study objectives and discussions held with the six program coordinators regarding their internal evaluation plans, it was determined that uniform instruments should be used to collect a certain amount of common data on program impact from all six programs. Consequently, EERI staff made an effort to locate appropriate instruments for measuring program impact, but it was concluded that instruments to meet the requirements of measuring the specific program outcome variables did not exist.

EERI staff drafted the necessary statewide data collection instruments (Student Questionnaire, Teacher Questionnaire, and Questionnaire for Students with Exceptional Needs) by selecting questions or items from commercially available instruments or from an instrument developed by one of the pilot awareness programs. The instrument development was guided by the following principles: the questionnaire (or test) should be no more than one page; it should take no more than 10 minutes to answer; it should be easy to administer; and it should cover all areas of major concern for the particular target group.

The draft instruments and accompanying instructions were revised based on comments made by the six program coordinators and the SDE project monitor. The final forms of the instruments and instructions were sent to the program coordinators in the first part of January 1987. (See Appendix A for the EERI-developed instruments.)

Collect Evaluation Data and Information

Each program coordinator was responsible for the administration of the EERI-developed questionnaires to appropriate individuals during the spring 1987 semester. Since the administration of these questionnaires was in addition to the evaluation data each program coordinator was collecting for his/her program evaluation, EERI staff could not specify a particular number of individuals to be tested by each program. It was left to each program coordinator to determine.

In February, each program coordinator was contacted to find out when and for how many students and teachers he/she planned to collect the statewide questionnaire data. This information was used to monitor the progress of data collection activities of the six programs by periodically contacting the program coordinators. By the end of June, the following number of matching pre and post questionnaires were returned to EERI from all six programs: 1,513 student questionnaires, 135 teacher questionnaires, and 73 questionnaires for students with exceptional needs.

Site visits were made to all six programs in June 1987. During the visit, the program coordinator was interviewed, all the necessary project documents were reviewed, and all the major products produced by the program were obtained. In addition, any available program evaluation reports or data summaries were obtained.

Analyze and Synthesize Data and Information

The statewide questionnaire data collected using the EERI-developed instruments were analyzed by EERI staff. The detailed procedures used for scoring and analyzing these data are given in Appendix B. In brief, the student questionnaire data were analyzed in two different ways. The first analysis was done based on the total awareness score for each student. The maximum possible awareness score was 60 and the minimum score 12. The pretest mean for the participating students was compared with their posttest mean to see if a significant change occurred regarding their overall awareness of the problems encountered by disabled persons. The second analysis was done based on students' responses to each question. The percentage of students showing the desirable answer to the question on the pretest was compared with the corresponding percentage on the posttest to see if there was a significant change. A "desirable" answer is defined as the desired response to the question in terms of what the Awareness Program attempts to achieve. The desirable response to each question is shown in Appendix B.

The teacher questionnaire data were analyzed in the same way as the second method used in the analysis of the student questionnaire data. The percentage of teachers showing the desirable answer to each question on the pretest was compared with the corresponding percentage on the posttest. Results on a group of questions were used to see if there was a significant change regarding a given area of concern. Four questions that were only on the posttest form of the teacher questionnaire had to be treated differently. They were included to collect data on the participating teachers' opinions about the success of the Awareness Program.

The disabled student questionnaire data were analyzed in a way similar to the first method used in the analysis of the student questionnaire data. Two subscale scores (Self-Esteem and Peer Status) were obtained for each student. The maximum possible subscale score was 15 and the minimum possible score 5. The pretest mean for the disabled students was compared with their posttest mean to see if a significant change had occurred regarding their self-esteem or peer status. The results from all the analyses mentioned above are presented in the results section below.

In addition to the analyses of the statewide questionnaire responses, the data and information collected through the site visits and documents

obtained from the individual programs were reviewed, interpreted, and re-analyzed as appropriate. This was done to accomplish three specific purposes. They were to: (a) understand and describe the main features of each program; (b) summarize the findings of the individual program evaluations; and (c) examine the extent to which each program met its objectives. These findings are presented in the results section and in Appendix C.

As a last step, findings from the statewide questionnaire responses and from the review of individual program evaluations were synthesized to address the objectives of the present evaluation study. The results are presented in the discussion and conclusions section of this final report.

RESULTS FROM EVALUATIONS CONDUCTED BY INDIVIDUAL PROGRAMS

In this section, each of the six awareness programs is briefly described and its own evaluation results are summarized. As mentioned before, the ultimate goal was the same for all six programs because it was determined by the legislative language (AB 2841): to make nonhandicapped students aware of the special problems encountered by disabled persons. To accomplish this goal, each program proposed its own objectives and carried out its own activities. A summary of accomplishments for each program is given in Appendix C. Since the six programs differed in their objectives and approaches, their program evaluations did not necessarily address the same issues. In the presentation of their evaluation findings in this section, however, the results are organized under the same headings for all six programs for the convenience of the readers.

Chico: In a Different Way

Program Description

The program operated in a middle sized city (population 30,000) school district with 13% ethnic minority group students and with 10% of the district students classified as handicapped. The program was flexible in length. Students spent five instructional hours to cover one disability area or 25 hours to cover all five areas. On the average, they spent 10 hours in the program. Instruction was done by a program trained classroom teacher.

Students learned types and causes of a disability, adaptations disabled people make, and feelings of empathy through reading, class discussions, and the use of films, simulation activities, and guest speakers. A minimum of six hours of training was required for a teacher to implement the curriculum.

1985-86 Evaluation

Student attitude. The project served 1,500 student in grades 1-8. Project-developed student knowledge/attitude tests were given but the results were not reported because project staff felt that the tests were not measuring what they were supposed to measure. As a consequence, student writings (letters) were collected and the contents of 20 randomly selected letters were analyzed. The results indicated some positive effects of the program in terms of expressed attitude change and learning about disability.

Student knowledge. The project-developed tests contained items measuring knowledge and/or attitude. There was no intention of providing separate scores on knowledge and attitude.

Teacher attitude and/or knowledge. Workshop evaluation forms were obtained from 28 of the 48 participants of full-day workshops. Their responses were very positive about the effectiveness of the workshops, but the evaluation forms did not provide scores on teachers' attitude and/or knowledge.

Other evaluations. Of the 28 respondents who participated in the teacher workshops, 19 (68%) field tested the curriculum. According to their responses to a questionnaire, 100% felt that their students' attitude toward the handicapped improved as the result of the program.

1986-87 Evaluation

Student attitude. The project served 2,800 students in grades 1-8. Project-developed student knowledge/attitude test scores were available for 85 students in grades 3-6. Their average score increased from 12.5 at pretest to 15.5 at posttest on the 20-item test, which was a significant change. Students showed more gain on attitude-related items than on knowledge-related items.

Student knowledge. The test mentioned above measured knowledge as well as attitude.

Teacher attitude and/or knowledge. Forty teachers participated in one or more full-day workshops. Seventeen teachers who participated in one of the workshops were tested for their knowledge gain. On the average their correct answers increased by 38% from pre to posttesting. Also, the Attitude Toward Disabled Persons Scale (ATDP) was administered to five secondary teachers, but the results were inconclusive. In addition, 45 workshop evaluation forms were collected, and participant comments on the forms indicated a positive change in teacher attitude, even though they were not quantifiable.

Other evaluations. Ninety-five percent of the 43 teachers who used the project lessons rated the curriculum excellent and 79% reported positive change in student attitude. Also, the intervention activities carried out by project staff to solve problems associated with mainstreaming were judged to be successful by the teachers who requested such intervention.

Fountain Valley: Speaking from Experience

Program Description

The program operated in a suburban district with 22% ethnic minority group students and with 12% of the district students classified as handicapped. The primary curriculum required four instructional hours over two weeks, the middle level curriculum required seven hours over four weeks, and the junior high curriculum four hours over two weeks. Instruction was done by a project teaching team, not by a regular classroom teacher.

The program used class discussions, videotapes, simulation activities, and homework assignments between lessons. It covered handicaps in general and was not focussed on specific disabilities. The teaching team always had one handicapped adult who was qualified to teach. Also, some older handicapped students in the target school were trained and worked as student assistants to the teaching team. All teaching and administrative personnel at a target school received one and a half hours of inservice. Handicapped students who would serve as student assistants also received one and a half hours of special training.

1985-86 Evaluation

Student attitude. The project served 950 students in grades 2 and 5. Scores on the Peer Attitudes Toward the Handicapped Scale (PATHS) were available (both pre and post) for 52 participating students in grade 5. Mean PATHS raw scores increased from 86.6 to 92.6 which was a statistically significant change. This change reflects improvement from the 32nd percentile at pretest to the 44th percentile at posttest using national norms.

Student knowledge. No formal evaluation of student knowledge was carried out.

Teacher attitude and/or knowledge. One-hour orientation training was given to about 70 teachers and administrators. No formal evaluation of their knowledge gain or attitude change was carried out. (One questionnaire item asked whether or not the staff inservice session explained the purpose and procedures of the program well.)

Other evaluations. A project-developed "Teacher and Administrator Evaluation Form" was given to 35 participants. One hundred percent of the respondents indicated satisfaction with the program's impact on students (understanding of and attitude toward handicapped students) and 66% to 96%

of them gave high ratings on various specific program activities and curriculum materials.

1986-87 Evaluation

Student attitude. The project served 1,100 students in grades 2 and 5 and an additional 35 students in grades 6-10. PATHS scores were available for 85 students in grade 5. No statistically significant change in the PATHS scores was found, even though the posttest mean was higher than the pretest mean. However, when the students were categorized into three groups for acceptance of handicapped peers based on the test scores (Low, Average, and High Acceptance groups), there was a 10% reduction in the number of students in the Low Acceptance group from pre to posttesting time.

Student knowledge. No data were available concerning change in student knowledge.

Teacher attitude and/or knowledge. One-hour orientation training was provided to about 90 teachers in the seven participating schools. No evaluation data were collected to measure changes in teacher attitude or knowledge.

Other evaluation. A project-developed "Teacher and Administrator Evaluation Form" was administered to 48 teachers and seven administrators. Ninety-six percent rated the project activities as highly successful and 98% reported that students gained a greater understanding of the needs of the handicapped. All special education teachers reported that the project activities helped to improve the peer status and self-esteem of the handicapped students.

Fresno: Different...But the Same

Program Description

The program operated in an urban district with 57% ethnic minority group students and with 9% classified as handicapped. A specially trained team of disabled adults made a one-hour presentation in each target classroom.

The classroom presenters shared experiences they have had with their disabling conditions and exhibited a positive approach to life. A 14 minute locally developed videotape was also shown to the students. Teachers of the target classrooms were encouraged to conduct follow-up activities using a

curriculum guide and activity sheets provided to them. The Program Director conducted a 45-minute inservice session for all teaching and administrative personnel in the target schools.

1985-86 Evaluation

Student attitude. The project served about 7,400 students in grades K-6. Project staff developed a student questionnaire to measure their knowledge and attitude change. It was administered to some participating students in the spring of 1986, but the results were not available.

Student knowledge. An attempt to measure student knowledge was made but was not very successful. No test data were available.

Teacher attitude and/or knowledge. No tests were administered to provide teachers' attitude or knowledge scores.

Other evaluations. A teacher questionnaire was developed to collect data on teachers' opinions about the effectiveness of the program, but no data were available.

1986-87 Evaluation

Student attitude. The project served 6,800 students in grades K-8. A project-developed test of student attitude/knowledge was given to students in several classes in the early part of the year but it did not allow the results to be easily quantified; therefore, the tests were not scored.

Student knowledge. A project attempt to measure student knowledge was not successful. The Project Director decided to utilize the data collected for a statewide evaluation by EERI, instead of collecting additional data.

Teacher attitude and/or knowledge. Approximately 250 teachers and 60 administrators participated in the staff training. Pre and posttest scores on the ATDP scale were available for 178 participants, and their mean score increased from 88.0 to 94.4, which indicated a statistically significant change in their attitude toward disabled persons.

Other evaluations. No other evaluation was carried out by project staff.

Riverside: Project LEAD

Program Description

The program operated in various school districts in Riverside and San

Bernardino counties. The program for elementary schools (Project LEAD) lasted 10 weeks. Handicapped adults provided a day of discussion and showed students adaptive equipment (Awareness Day). About 15 students in a school were trained in four sessions over four weeks as peer facilitators, who presented simulations in classes once a week over six weeks. Teachers helped the facilitators and were encouraged to teach their students using the prepared materials once a week over a six-week period.

The program for middle schools (Project IMAGINE) lasted three weeks. Instruction was done by a local coordinator, and teachers were not involved in direct student instruction. Otherwise, it was like the Project LEAD. Two days were needed to train the trainers who would work as local coordinators. They then trained participating school staff in one-hour orientation sessions. The peer facilitator training was also conducted by the local coordinator.

1985-86 Evaluation

Student attitude. The project served 600 students in grades K-5 at two campuses on a school site at a "two-roof" situation. Scores on the project-developed "Attitude Toward Handicapped Conditions Scales" were available (pre and post) for 66 students in grades 3, 4, and 5. There was no significant change in the student attitudes from the pre to posttesting times. Before Project LEAD, the boys showed significantly less favorable attitudes than the girls toward the mentally retarded, blind, deaf, speech impaired, and physically disabled, but these sex differences in attitudes became insignificant after Project LEAD because of the improvement in the boys' attitudes.

Project-developed "sociometric" measures were also obtained from 122 regular and communicatively handicapped students. No significant changes were found between the pre and posttesting times. In spite of Project LEAD, the level of acquaintance between the handicapped and nonhandicapped students did not change significantly.

Student knowledge. No formal evaluation of student knowledge was carried out.

Teacher attitude and/or knowledge. A project-developed staff questionnaire was administered to all (39) staff members at the two campuses regarding the amount of contact they had with staff and students of the other

campus and their attitude toward the possible integration of the two campuses. There was a significant increase in staff contact reported by both the regular and special education teacher groups after Project LEAD. Also, a significant increase in student contact was reported by the special education teacher group. No change in attitude toward integration was reported. There was also no significant change in the level of familiarity across the two campuses following Project LEAD (as shown by a sociometric measure). Perceptions of the special education campus and the special education students reported by educators on the regular campus (using semantic differential scales) did not significantly change following Project LEAD.

Other evaluations. A participant observer reported that there was increasing interaction between handicapped and nonhandicapped students on the two campuses as a result of Project LEAD.

1986-87 Evaluation

Student attitude. The project served grades K-8 students in Riverside and San Bernardino counties, but the number of students served was unknown. Project-developed "Attitude Toward Handicapped Conditions Scales" were administered to 600 students in grades 3, 4, and 5, but the data had not been analyzed at the time this report was prepared.

Student knowledge. A project-developed student survey was administered to 600 students. The data had not been analyzed at the time this report was prepared.

Teacher attitude and/or knowledge. A project-developed teacher survey was administered to 30 teachers in two participating schools. The data had not been analyzed at the time this report was prepared.

Other evaluations. Forty teachers and other school staff members attended workshops for Project LEAD trainers, but no data were collected to measure the effectiveness of the training.

San Juan: Hand in Hand

Program Description

The program operated in a suburban district with 11% ethnic minority group students and with 10% of the district students classified as handicapped. Students received 11 to 13 30-minute lessons. Instruction was done by project staff or trained classroom teachers/nurses/health educators.

The program provided information about various disabilities, exposed students to equipment used by the disabled using simulation activities, and provided the opportunity to interact with the disabled, including a presentation by a guest speaker. There was 10-hour staff training for teachers and support personnel; a shortened version (four hours) of the training was also available.

1985-86 Evaluation

Student attitude. The project served 1,500 students in grades K-8. Pre and posttest data from project-developed tests were available for 435 participating students in grades 1-8. The tests contained items measuring student knowledge and/or attitude. For grades 1-3, the students showed a significant positive change (10% or greater pre-post change) on nine of the 10 items. For grades 4-5, they showed a significant change on 21 of the 25 items. For grades 6-8, a significant change was found on 24 of the 30 items.

Student knowledge. The project-developed tests contained items measuring knowledge and/or attitude. There was no intention to provide separate scores on knowledge and attitude.

Teacher attitude and/or knowledge. About 50 people participated in one of the regular training workshops or a shortened presentation. However, no evaluation was done to measure changes in teacher attitude or knowledge.

Other evaluations. A project-developed "Teacher Survey" was given to 34 teachers. About 94% to 100% of the teachers indicated that the objectives of various lessons were met and various instructional activities (e.g., use of films and guest speakers) were well chosen. About 97% of them reported that students' overall reactions to the program were very positive.

1986-87 Evaluation

Student attitude. The project served 1,069 students in grades K-8. Pre and posttest data from project-developed tests were available from 304 students in grades 1-8. The tests contained items measuring students' knowledge and/or attitude. For grades 1-2, the students showed a significant positive change (10% or greater pre-post change) on six of the 10 items. For grades 3-5, they showed a significant change on 21 of the 22 items. For grades 6-8, a significant change was found on 17 of the 27 items.

Student knowledge. The project-developed tests contained items measuring knowledge and/or attitude. No attempt was made to provide separate scores on knowledge and attitude.

Teacher attitude and/or knowledge. A total of 141 people participated in the staff training but no formal evaluation was done to measure changes in the attitude or knowledge of the participants.

Other evaluations. Data from a project-developed workshop evaluation form were available for 30 inservice participants and 60% said their personal level of awareness increased a lot. Also, a project-developed "Teacher Survey" was given to 30 program participants and 96% to 100% of them reported that the objectives of the various lessons were met. About 96% said that students' overall reactions to the program were very positive.

South Bay: ADEPT

Program Description

The program operated in three suburban districts with very different proportions of ethnic minority group students (7%, 65%, and 92%, respectively). However, the three districts had very similar proportions of students classified as handicapped (9% to 11%). The program lasted 11 weeks and students spent 30 instructional hours for the program. Instruction was done by a regular classroom teacher who was trained for the program.

The teacher taught lessons, disabled speakers made presentations, and finally the students visited and interacted with severely handicapped peers. Some students did extensive peer tutoring at severely handicapped classes. Teachers were trained in a three-hour workshop, followed by a two-hour visitation to severely handicapped classes.

1985-86 Evaluation

Student attitude. The project served 166 nonhandicapped students in grades 5 and 6. ATDP scale scores were available (pre and post) for 68 project participants and 47 nonparticipants. Mean ATDP scale scores for participants increased from 66.3 to 73.7, which was a significant change. Mean ATDP scale scores for nonparticipants changed little from pre to post (59.4 to 58.9). An additional 84 participants had only posttest scores, and their mean score was 71.3.

Student knowledge. Project-developed "Student Feedback Forms" were

used to find out what students learned after completion of each of the four units. Each form contained 5 items of the sentence completion type and did not allow any scoring. The project evaluator, after reviewing the responses of 115 students, stated that there was a high degree of new knowledge gained. No formal analyses of the test data were carried out.

Teacher attitude and/or knowledge. Six teachers were trained but there was no formal evaluation to measure their knowledge or attitude change.

Other evaluations. A project-developed "Survey" was given at the end of the year to the six participating teachers. They gave high ratings to project activities (between good and excellent), materials (good), and administration of the program (good). Teachers' responses indicated that all of them were satisfied with the program.

1986-87 Evaluation

Student attitude. The project served 482 students in grades 4-6. Pre and posttest scores on the ATDP scale were available for 145 first semester students and 203 second semester students. The mean ATDP score for the first semester students increased from 62.6 to 74.3, which was a significant positive change. However, the mean ATDP score for the second semester students actually decreased slightly from pretest (70.3) to posttest (70.0). This decrease occurred mainly because of a drastic decline of scores in one particular school which happened to have a large number of program participants.

Student knowledge. A project-developed cognitive test was administered pre and post. Scores were available for 121 first semester students and 203 second semester students. On the average, the first semester students gained 1.6 points on the 20-item test from pre to posttesting (13.4 to 15.0), which was a statistically significant gain. However, the second semester students showed no significant gain (13.2 to 14.0).

Teacher attitude and/or knowledge. Twelve teachers were trained but no formal evaluation was carried out to measure their knowledge or attitude change.

Other evaluations. A project-developed evaluation form was given to the 12 participants at training workshops. They gave high ratings to various aspects of the training.

RESULTS FROM STATEWIDE EVALUATION QUESTIONNAIRES

Statewide evaluation data were collected using questionnaires for regular students, teachers, and students with exceptional needs. Results from the analyses of data from these questionnaires are presented in this section.

Student Questionnaire Results

Pre and post matching data on the student questionnaire were available for 1,513 students who participated in one of the six programs. The data were analyzed in two different ways as described in the method section.

Changes in the overall awareness of regular students. The first analysis was done based on the total awareness scores. Since the ultimate program goal was to increase student awareness of the special problems encountered by disabled persons, the change in the total awareness scores following the program represents its overall effect. The results from this analysis are shown in Table 1.

Table 1
Changes in the Total Awareness Scores of Participating Students
(N=1,513)

Program	N	Pretest		Posttest		Mean Diff.	t*
		Mean	S.D.	Mean	S.D.		
A	146	49.1	5.6	51.0	6.1	1.9	4.65
B	446	47.1	6.2	49.3	6.5	2.2	8.37
C	217	43.9	6.6	47.2	6.0	3.3	8.46
D	130	48.6	5.4	52.3	5.5	3.7	9.51
E	221	44.3	5.9	50.0	6.3	5.7	12.06
F	353	47.6	6.2	52.3	5.4	4.7	14.93

*t-values were computed using a formula for a test of mean difference for correlated scores.

On a statewide basis, the mean of the total awareness score increased by 3.5 from 46.7 on pretest to 50.2 on posttest, which was a statistically significant change. The data also indicate that all six individual programs resulted in a statistically significant change in the overall awareness of

their participating students, even though the magnitude of the changes was different among the six programs.

Changes in student knowledge. The second analysis of the student questionnaire was done based on students' responses to each question (item). The percentage of students showing the desirable answer to the question on pretest was compared with the corresponding percentage on the posttest to see if there was a significant change. Both educational and statistical significance were considered. A change of 10% or more was used as the criterion for educational and statistical significance because (a) all the pre-post differences of 10% or more were statistically significant in this analysis and (b) changing 10% of the students in a positive direction was considered an educationally worthwhile effort. The results are shown in Table 2. The figures in the table represent pre-post changes (posttest percent minus pretest percent).

The first three items on the student questionnaire are related to student knowledge. As the data in Table 2 show, all six programs made a significant change on item 1 (Deaf people are able to use a telephone). About half of the programs made such changes on item 2 (People who are in wheelchairs can live alone) and item 3 (A child who is blind can enjoy most of the same games as a child who can see). The data clearly indicate that the awareness programs increased student knowledge about what handicapped people can do.

Student acceptance of disabled individuals. Items 4, 5, and 6 are related to student acceptance of handicapped peers. Four out of the six programs made a significant change on item 4 (It is OK to have disabled students in my class) and item 5 (Disabled students should be sent to their own special school), while no program made such a change on item 6 (Everyone is alike in some ways and different in some ways). A closer examination of the data revealed that the main reason for no significant changes on item 6 was the fact that a very high percentage of the students, ranging from 84% to 98% for the various programs, already gave the desired response on the pretest. (See Table D-1 in Appendix D.) Therefore, there was little room to show a 10% or greater change in a positive direction. The data as a whole indicate that a majority of the programs increased student acceptance of handicapped peers.

Table 2
Changes in the Percentage of Students Showing Desirable Responses

	<u>Percentage Change of Desirable Responses by Program</u>						
<u>Item</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>All</u>
<u>Student knowledge</u>							
1	19.2*	27.4*	26.7*	33.1*	54.8*	51.8*	36.7*
2	4.1	11.2*	18.4*	3.8	34.4*	17.3*	15.7*
3	14.4*	8.5	7.8	9.2	26.7*	24.1*	15.3*
<u>Acceptance of disabled persons</u>							
4	3.4	4.9	18.0*	10.8*	15.8*	13.3*	10.7*
5	2.1	9.4	12.9*	10.8*	15.4*	17.3*	12.0*
6	0.0	2.0	4.6	-1.5	5.9	2.8	2.6
<u>Student attitude</u>							
7	-2.7	1.8	11.5*	13.1*	4.5	-2.8	3.0
8	3.4	6.3	0.9	9.2	18.6*	5.4	7.1
9	0.0	5.2	7.4	10.8*	14.5*	9.6	7.9
<u>Awareness of physical barriers</u>							
10	-5.5	0.0	3.2	4.6	0.5	0.6	0.5
11	0.0	-0.2	2.8	10.8*	3.6	4.8	2.9
12	1.4	-0.2	2.8	0.0	-0.5	5.7	1.7

*Change that is statistically as well as educationally significant.

Note. A "desirable" response is the desired answer to a question in terms of what the Awareness Program attempts to achieve. The desirable response to each question is shown on page 37 in Appendix B.

Student attitude. Items 7, 8, and 9 are related to student attitude toward handicapped people. Only one or two programs made a significant change on one of these items. When all programs were combined, no significant change was found on any of the items. The data indicate that the awareness programs did not significantly change the attitude of the participating students towards the handicapped. It should be noted, however, that measuring attitude change is known to be a very difficult task, especially with a small number of items.

Awareness of physical barriers. Items 10, 11, and 12 are related to student awareness of physical barriers faced by handicapped persons. This is the area where the least amount of student change occurred. No significant change was found except for one program on one item. A close examination of the data showed that a great majority (82% to 96%) of the students were already aware of the kind of physical barriers covered by the three items; therefore the absence of student change was most probably the result of ceiling effects rather than a reflection of no program impact in this area.

Teacher Questionnaire Results

Pre and post matching data on the teacher questionnaire were available for 135 teachers who participated in one of the six programs. Results from the analysis of the data are shown in Table 3. Since half of the six programs had 11 or fewer teachers for whom data were available, only the statewide results are presented below. The results by individual programs are given in Table D-2 in Appendix D. The questionnaire items are shown on page 34 in Appendix A.

Teacher understanding and acceptance. Items 1, 2, and 3 are related to teacher understanding and acceptance of disabled persons. The teachers showed a statistically as well as educationally significant change on one item and a considerable change on the other two items. The data clearly indicate that the programs as a whole increased the understanding and acceptance of handicapped students by the participating teachers.

Teacher attitude. Items 4, 5, and 6 are related to teacher attitude towards handicapped persons. The respondents showed a significant change on one item and a considerable change on another item. On the third item they could not show a large change because 96% already gave the desirable response on the pretest. The data indicate that the programs had a positive impact on participating teachers' attitude toward handicapped persons.

Teacher awareness of physical barriers. Items 7, 8, and 9 are related to teacher awareness of physical barriers faced by handicapped people. As might be expected, almost all respondents were already aware of the physical barriers at the time of pretesting. Because of the ceiling effect, little change could be shown on these items.

Table 3
Participating Teacher Responses to Teacher Questionnaire Items
(N=135)*

Item	Variable	Percent of Desirable Responses		
		Pre	Post	Change
1	Teacher understanding and acceptance	83.0	92.6	9.6
2	" " "	63.7	76.3	12.6**
3	" " "	91.2	100.0	8.8
4	Teacher attitude towards the handicapped	74.3	83.1	8.8
5	" " " " "	77.9	91.1	13.2**
6	" " " " "	96.3	97.8	1.5
7	Teacher awareness of physical barriers	98.5	100.0	1.5
8	" " " " "	97.1	99.3	2.2
9	" " " " "	98.5	99.2	0.7
10	Students became more receptive	—	92.0	—
11	Students became more understanding	—	92.4	—
12	Students' attitude changed	—	78.2	—
13	Handicapped improved peer status	—	68.9	—

*N for Item 10 = 274, Item 11 = 275, Item 12 = 275, and Item 13 = 61.

**Change that is statistically as well as educationally significant.

Teacher perception of program effectiveness. Items 10, 11, 12 and 13 were included only in the posttest form of the teacher questionnaire to collect data on the participating teachers' opinions about the success of the Awareness Program. Over 90% of the respondents felt that their students became more receptive to disabled people and more understanding of the needs of these people. About 78% reported a positive change in their students' attitude toward the disabled as a result of the Awareness Program. Also, 69% of the respondents who had disabled students in their classes felt that the disabled students improved their peer status or self-esteem as a result of the program. The responses to these four questions indicate that the participating teachers perceived the Awareness Program as successful.

Questionnaire for Students with Exceptional Needs Results

Pre and posttest matching data on the disabled student questionnaire were available for 73 students statewide. As mentioned before, this questionnaire provides two subscores for each student; Self-Esteem and Peer Status. Means and standard deviations for pre and posttest are shown in Table 4. There was no significant difference between pre and posttest scores on either the self-esteem scale or peer status scale. The results indicate that either the Awareness Program did not significantly change the self-esteem or peer status of the participating handicapped students, or that the questionnaire was not very effective in revealing the changes that occurred among the handicapped students as a result of the program. Measuring changes in self-esteem or peer status is a very difficult task, especially with a short instrument.

Table 4

Changes in the Self-Esteem and Peer Status Scores of the Disabled Students

Scale	N	Pretest		Posttest		Mean Difference	t*
		Mean	S.D.	Mean	S.D.		
Self-Esteem	73	13.0	1.7	13.4	1.9	0.4	1.72
Peer Status	73	12.2	2.4	12.4	2.6	0.2	0.80

*t-values were computed using a formula for a test of mean difference for correlated scores.

DISCUSSION AND CONCLUSIONS

In this section, the results from the evaluation efforts of individual awareness programs as well as the result from the analysis of statewide data are brought together. They are discussed in terms of the areas of concern to be addressed by the study. Conclusions were drawn as appropriate on the basis of all available evidence. The conclusions should be taken very cautiously in light of the study limitations given in the introduction section.

Student Knowledge about Individuals with Exceptional Needs

One of the major objectives of this study was to find out if the Awareness Program was effective in increasing student knowledge about disabled persons. The statewide evaluation results showed that the percentage of participating students giving the correct answer to the knowledge related items increased significantly as a result of the program (see page 18). In addition, a positive or significantly positive change in student knowledge was reported by three of the six awareness programs from their own evaluations in 1985-86 as well as in 1986-87 (see pages 7-16). The remaining three programs did not measure student knowledge changes. These results together clearly indicate that the Awareness Program was quite effective in imparting knowledge about disabled persons to nonhandicapped students.

Student Acceptance of Disabled Individuals

Another major objective of the study was to find out if the Awareness Program increased the nonhandicapped students' acceptance of disabled persons. Three questions on the statewide student questionnaire were directly related to student acceptance: whether students were willing to have a disabled peer in their class or school, and whether they realize that everyone is alike in some ways and different in others. The student responses indicated that the Awareness Program increased their acceptance of disabled persons, although the evidence was not as strong as in the case of student knowledge (see page 18). Among the individual program evaluations, one program reported data related to this issue and there was no change in the level of acquaintance between disabled and nondisabled students following the program (see page 12). No other individual program attempted to measure specifically student acceptance of disabled persons in its evaluation. It is concluded that insufficient data exist to determine if the Awareness Program increased student acceptance of disabled persons, although the statewide questionnaire data indicated some positive effect in this area.

Student Attitude towards Disabled Individuals

The third major objective of the study was to find out if the Awareness Program was effective in improving student attitude towards disabled persons. The statewide evaluation results showed that the percentage of the participating students giving the desirable response to the attitude related questions increased somewhat, but not significantly (see page 19). However, the findings reported by individual programs from their own evaluations were very positive in this area. For instance, among the five programs reporting such findings in 1985-86, three reported a significant positive change and two reported some positive change in attitude. Also, two programs reported a significant change in 1986-87, two some positive change, while data were not available for the remaining two programs (see pp. 7-16). These results indicate that some of the awareness programs were able to make a positive attitude change in participating students even though the Awareness Program as a whole did not show a significant attitude change.

Student Awareness of Physical Barriers

Another major objective of this study was to determine if the program increased the awareness of nonhandicapped students about physical barriers faced by disabled persons. The statewide evaluation data showed that 82% to 96% of the students in each of the six programs were already aware of the barriers before their participation. As a consequence, there was not much room to increase their awareness in this area. The result can be interpreted as evidence that the Awareness Program may not need to be so concerned about making students aware of physical barriers encountered by disabled persons. It should be noted, however, that the three items related to physical barriers on the statewide student questionnaire were all concerned with problems faced mainly by wheelchaired persons. It is quite possible, therefore, that nonhandicapped students still need to be instructed about the physical barriers faced by other types of disabled persons. Actually, all six programs carried out many instructional activities (e.g., simulations) to make students aware of physical difficulties faced by various types of disabled persons and they probably had a positive impact, even though little data were reported on this specific issue in their evaluations.

Teacher Understanding and Acceptance of Disabled Individuals

Change in teacher understanding and acceptance of disabled individuals

was one area of concern for the study. The three questions on the statewide teacher questionnaire asked them whether they don't mind having disabled students in their class or school and whether it is all right to talk about disability with a disabled person. The percentage of the teachers who gave the desirable answers increased considerably (8.8% to 12.6% depending on the item) following the Awareness Program.

Among the individual program evaluations, in 1986-87 one program reported a significant positive change in teacher knowledge about disabled persons. No other programs formally measured the changes in teacher knowledge, understanding, or acceptance of disabled persons. However, two programs in 1985-86 and four programs in 1986-87 reported a very positive response from teachers about the workshops in which they participated, which might be interpreted as showing that these teachers became more understanding and accepting of disabled people as a result of this experience (pp. 7-16). Considering these results together, it is concluded that the Awareness Program promoted teacher understanding and acceptance of disabled persons.

Teacher Attitude towards Disabled Individuals

Change in teacher attitude toward disabled persons was another area of concern for the study. The statewide evaluation data indicated that the Awareness Program had a positive impact on the participating teachers' attitude (p. 20). Considering the individual program evaluations, in 1985-86 only one program reported evaluation results regarding teacher attitude, and they showed some positive change. In 1986-87, two programs reported teacher attitude change data; one result was inconclusive, the other showed a significant positive change (pp. 7-16). These results together indicate that the Awareness Program had some positive impact on the participating teachers' attitude towards disabled persons, although the impact was not always significant.

Teacher Awareness of Physical Barriers

Change in teacher awareness of physical barriers faced by disabled persons was one area of concern for the study. The statewide evaluation data showed that almost all respondents were already aware of the physical barriers at the time of pretesting (see p. 20); therefore, there was little opportunity to show an increased awareness. It is unknown whether or not the program made the participating teachers aware of the kinds of physical barriers that were not covered by the questions on the statewide teacher

questionnaire. No individual program reported any evaluation results either in 1985-86 or 1986-87 regarding program impact in this area. It is concluded that insufficient data exist to determine if the program increased teacher awareness about physical barriers encountered by persons with disabilities.

Peer Status and Self-Esteem of Students with Disabilities

Another area of concern for this study was whether or not the peer status and self-esteem of disabled students increased as a result of the program. As seen from the responses to the statewide teacher questionnaire (p. 21), in the opinion of 69% of the participating teachers, the program had this intended effect on the target students. However, the statewide questionnaire data from the disabled students did not show a significant improvement of their peer status or self-esteem (p. 22). Several explanations can be given for this finding. One possibility is that the number of students tested (N=73) was too small to reveal such a change, considering the diversity of disabled students involved. Another possibility is that the questionnaire used with the disabled students was not sensitive enough to detect any change. Finally, the lack of change may have been real, that is, the Awareness Program was not able to cause the desired impact. It is quite possible that improving the peer status or self-esteem requires more than a short-term awareness program.

SUMMARY AND RECOMMENDATIONS

Summary of Major Findings

To study the effectiveness of the Awareness Program under AB2841, findings from individual program evaluations conducted by six pilot awareness programs over the past two years were reviewed. In addition, statewide evaluation data collected in the spring semester of 1987 were analyzed. The following summarizes the major findings.

1. The Awareness Program met its overall goal, that is, with varying degrees of success all six pilot awareness programs made nonhandicapped students aware of the special problems encountered by disabled persons.
2. The Awareness Program was successful in significantly increasing student knowledge about disabled persons.
3. Some of the pilot programs were able to make a positive change in student attitude toward disabled persons even though the Awareness Program as a whole did not show a significant attitude change.
4. Both students and teachers were well aware of physical barriers faced by disabled persons even before their participation in the Awareness Program.
5. There was some evidence, although not definite, that the Awareness Program promoted student and teacher acceptance of disabled persons.
6. There was some evidence that the Awareness Program had a positive impact on teacher attitude toward disabled persons even though the data in this area were very limited.
7. There was insufficient evidence to determine if the Awareness Program was effective in improving the peer status or self-esteem of disabled students.

Recommendations

1. Since the Awareness Program has proven to be effective in meeting its overall goal, it is recommended that the program be disseminated to other schools and districts in the state.
2. There is a large variation among the six pilot programs in terms of

were able to meet at least the overall goal of the Awareness Program, it is recommended that several options be given to prospective program adopters rather than limiting the choice to one or two.

3. In selecting pilot programs for possible statewide dissemination, it is recommended that state staff consider several factors such as the quality of materials, ease of replication, and cost, in addition to program effectiveness.
4. It is recommended that, in the dissemination phase of the Awareness Program, a statewide evaluation be carried out in order to study the effectiveness of individual awareness programs being disseminated as well as the overall effectiveness of the statewide dissemination effort.
5. It is also recommended that more definite guidelines and assistance be provided to the staff of individual awareness programs if they are required to carry out their own program evaluations in the future.

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APPENDIX A

Statewide Collection of Effectiveness Data for Awareness Training Programs*

Four questionnaires are being used to collect uniform effectiveness data for the six Awareness Training Programs. They are:

1. Student Questionnaire
2. Teacher Questionnaire (Pre)
3. Teacher Questionnaire (Post)
4. Questionnaire for Students With Exceptional Needs

General Information

1. Duplicate as many copies of each questionnaire as you need.
2. Administer the questionnaires as pretests to as many respondents as you can beginning immediately. Administer them as posttests to as many of the same respondents as you can through May 30. About March 20 those administered at that time will be collected and analyzed to prepare an interim summary of effectiveness data for Department of Education use.
3. The data should be collected in addition to whatever effectiveness data you are collecting for your own program.
4. If any of the items on the statewide forms are identical to items on your own forms, you may, if you wish, eliminate the duplicate items from your forms and duplicate the completed statewide forms for your own use.
5. Please keep track of the dates on which the pretest and posttest forms are administered. Keep them in separate piles since date is not requested on the forms themselves.

Student Questionnaire

1. The same questionnaire is to be used for pretest and/or posttest.
2. Administer the form to program students in grades 4 to 8.
3. If it is not possible to use it as a pretest, use it as a posttest only.
4. If necessary, the teachers can read each statement to the students.

*This instruction was given to the coordinators of the six awareness programs in January, 1987.

Teacher Questionnaires

1. Note that there are separate pre- and posttest forms for the teachers.
2. When it is not feasible to administer the pretest form, use the posttest form only. Note that the "treatment" period for teachers can be defined to include, for example, the time that they are teaching students after their inservice training.
3. Teachers may not necessarily respond differently on the posttest than on the pretest, but the scales used may show some changes.

Questionnaire for Students With Exceptional Needs

1. The same questionnaire is to be used for pretest and/or posttest.
2. Administer the form to disabled students who have been involved in the program whenever it is reasonable or feasible to do so.
3. If it is not possible to use it as a pretest, use it as a posttest only.
4. The questions can be read to the students individually in an interview.
5. Special effort will be required to collect data with this form. However, increasing the peer status and self-esteem of students with disabilities is one of the objectives of the legislation for the Awareness Training Programs, and little data are available about it. Please do the best you can with it.

STUDENT QUESTIONNAIRE

Name _____ Grade _____ School _____

Circle the number to indicate how much you agree or disagree with each statement.

	Strongly Agree	Agree	Not Sure	Dis- agree	Strongly Disagree
1. Deaf people are able to use a telephone.	5	4	3	2	1
2. People who are in wheelchairs can live alone.	5	4	3	2	1
3. A child who is blind can enjoy most of the same games as a child who can see.	5	4	3	2	1
4. It is OK to have disabled students in my class.	5	4	3	2	1
5. Disabled students should be sent to their own special school.	5	4	3	2	1
6. Everyone is alike in some ways and different in some ways.	5	4	3	2	1
7. I feel uncomfortable around a disabled person.	5	4	3	2	1
8. Disabled persons can have a normal social life.	5	4	3	2	1
9. Disabled people do not make much of a contribution to society.	5	4	3	2	1
10. Buildings used by the public that have stairs should have ramps or elevators that can be used by disabled people.	5	4	3	2	1
11. Buildings used by the public should have rest rooms, special telephones, and water fountains that can be used by people in wheelchairs.	5	4	3	2	1
12. If you are in a hurry it is OK to park in a special parking space for disabled people if you are not disabled.	5	4	3	2	1

TEACHER QUESTIONNAIRE (PRE)

Name _____ Grade _____ School _____

Circle the number to indicate how much you agree or disagree with each statement.

	Strongly Agree	Agree	Not Sure	Dis- agree	Strongly Disagree
1. I don't mind having disabled students in my class.	5	4	3	2	1
2. Disabled students should be sent to their own special school.	5	4	3	2	1
3. It is all right to talk about disability with a person who is disabled.	5	4	3	2	1
4. I feel uncomfortable around a disabled person.	5	4	3	2	1
5. Disabled persons can have a normal social life.	5	4	3	2	1
6. Disabled people do not make much of a contribution to society.	5	4	3	2	1
7. Buildings used by the public that have stairs should have ramps or elevators that can be used by disabled people.	5	4	3	2	1
8. Buildings used by the public should have rest rooms, special telephones, and water fountains that can be used by people in wheelchairs.	5	4	3	2	1
9. If you are in a hurry it is OK to park in a special parking space for disabled people if you are not disabled.	5	4	3	2	1

TEACHER QUESTIONNAIRE (POST)

Name _____ Grade _____ School _____

Circle the number to indicate how much you agree or disagree with each statement.

	Strongly Agree	Agree	Not Sure	Dis- agree	Strongly Disagree
1. I don't mind having disabled students in my class.	5	4	3	2	1
2. Disabled students should be sent to their own special school.	5	4	3	2	1
3. It is all right to talk about disability with a person who is disabled.	5	4	3	2	1
4. I feel uncomfortable around a disabled person.	5	4	3	2	1
5. Disabled persons can have a normal social life.	5	4	3	2	1
6. Disabled people do not make much of a contribution to society.	5	4	3	2	1
7. Buildings used by the public that have stairs should have ramps or elevators that can be used by disabled people.	5	4	3	2	1
8. Buildings used by the public should have rest rooms, special telephones, and water fountains that can be used by people in wheelchairs.	5	4	3	2	1
9. If you are in a hurry it is OK to park in a special parking space for disabled people if you are not disabled.	5	4	3	2	1
10. The Awareness Program helped the students in my class to be more receptive to disabled people.	5	4	3	2	1
11. The students in my class gained a greater understanding of the needs of the disabled as a result of the Awareness Program.	5	4	3	2	1
12. As a result of the Awareness Program positive changes have occurred in the attitudes of the students in my class.	5	4	3	2	1
13. (Skip this question if there are no disabled students in your class.) As a result of the Awareness Program the disabled students in my class improved their peer status and/or self-esteem.	5	4	3	2	1

QUESTIONNAIRE FOR STUDENTS WITH EXCEPTIONAL NEEDS

Name _____ Grade _____ School _____

Please circle one answer for each question.

- | | | | |
|---|-----|----|----------|
| 1. Are you a happy person? | Yes | No | Not sure |
| 2. Do you feel you do good work in school? | Yes | No | Not sure |
| 3. Do you think other people can count on you? | Yes | No | Not sure |
| 4. Are people usually nice to you? | Yes | No | Not sure |
| 5. Can you do a lot of things on your own? | Yes | No | Not sure |
| 6. Do your friends often follow your ideas? | Yes | No | Not sure |
| 7. Do you get along well with other students in school? | Yes | No | Not sure |
| 8. Do you have many friends in school? | Yes | No | Not sure |
| 9. Do many students in your class like to work with you? | Yes | No | Not sure |
| 10. Do many students in your class like to play with you? | Yes | No | Not sure |

APPENDIX B

[This is an internal document used by EERI staff in the analysis of statewide data.]

87-469

5/25/87

PROCEDURES FOR SCORING AND ANALYZING STATEWIDE QUESTIONNAIRE RESPONSES

The analyses of all three statewide questionnaires will involve comparing respondents' pretest scores and posttest scores. Eliminate any questionnaires unless there are both a pretest and a posttest for the same respondent.

If a respondent omitted an item on the pretest (posttest), use the score for the item from his/her posttest (pretest) if available, otherwise omit that item for that respondent.

Questionnaire for Students with Exceptional Needs

Scoring:

1. "Yes" response is scored as 3 points, "No" response as 1 point, and "Not sure" as 2 points.
2. For each student, add points on items 1 to 5 to obtain "Self-esteem" score. (Maximum possible score = 15, minimum possible score = 5.)
3. Add points on items 6 to 10 to obtain "Peer status" score. (Maximum possible score = 15, minimum possible score = 5.)

Analyses:

1. Compute pretest means (self-esteem and peer status separately) for a group; compute posttest means for the group.
2. Run a test of significance between pretest and posttest means. (Use a formula for correlated data).

Student Questionnaire: Method 1

Scoring

1. Student responses are scored as follows, except for items 5, 7, 9, and 12.

Strongly Agree	= 5
Agree	= 4
Not sure	= 3
Disagree	= 2
Strongly Disagree	= 1
2. For items 5, 7, 9, and 12, the scores should be reversed.
3. Add points on all 12 items to obtain the Total Awareness Score for a student. (Maximum possible score = 60, minimum possible score = 12.)

Analyses:

1. Compute pretest mean for a group; compute posttest mean for the group.
2. Run a test of significance between pretest and posttest means (use a formula for correlated data).

Student Questionnaire: Method 2

Scoring:

1. Treat each item as an independent question. No scoring is needed.
2. The desirable responses are: "Agree" and "Strongly Agree" for items 1, 2, 3, 4, 6, 8, 10, and 11; and "Disagree" and "Strongly Disagree" for items 5, 7, 9, and 12.

Analyses:

1. There are five response categories. Make the five categories into three by collapsing "Strongly Agree" with "Agree" and "Strongly Disagree" with "Disagree."
2. For each item, obtain frequency count and corresponding percent for each of the three categories.
3. Compare the percent on pretest with the corresponding percent on the posttest to see if there was a significant change. Any pre-post change (posttest percent minus pretest percent) of 10% or more is considered significant. However, if you want to be really conservative, consider a change of 15% as significant.
4. Interpret the significant changes on items 1, 2, and 3 in terms of student knowledge; the changes on items 4, 5, and 6 in terms of student understanding and acceptance; the changes on items 7, 8, and 9 in terms of student attitude; and the changes on items 10, 11, and 12 in terms of student awareness of physical barriers. Note that for items 5, 7, 9, and 12 "Disagree" is the more desirable response.

Teacher Questionnaire

Scoring:

1. Treat each item as an independent question. No scoring is needed.
2. The desirable responses are: "Agree" and "Strongly Agree" for items 1, 3, 5, 7, 8, 10, 11, 12, and 13; and "Disagree" and "Strongly Disagree" for items 2, 4, 6, and 9.

Analyses:

1. There are five response categories. Make the five categories into three by collapsing "Strongly Agree" with "Agree" and "Strongly Disagree" with "Disagree."
2. For each item, obtain frequency count and corresponding percent for each of the three categories.
3. Compare the percent on pretest with corresponding percent on posttest to see if there was a significant change. Any pre-post change (posttest percent minus pretest percent) of 10% or more is

considered significant.

4. Interpret the significant changes on items 1, 2, and 3 in terms of teacher understanding and acceptance; the changes on items 4, 5, and 6 in terms of teacher attitude; and the changes on items 7, 8, and 9 in terms of teacher awareness of physical barriers. Note that, for items 2, 4, 6, and 9, "Disagree" is the more desirable response.
5. The posttest form of the Teacher Questionnaire has items 10, 11, 12, and 13. Teacher responses to these four items should be used as indicators of overall effectiveness of the awareness program as perceived by the participating teachers.

APPENDIX C

PROGRAM ACCOMPLISHMENTS IN 1985-86 AND 1986-87

Accomplishments of each of the six awareness programs during the years 1985-86 and 1986-87 are summarized below. For the convenience of readers, the accomplishments are grouped into three broad areas: curriculum development, staff training, and student instruction. Within these categories, the accomplishments of each program are listed in terms of its stated objectives. However, it should be noted that: only major objectives for the program are addressed when there were a large number of very specific program objectives for a program, and that the list for each program represents major accomplishments only rather than a complete list of all the accomplishments of the program. An asterisk (*) indicates an objective which was not met, only partially met, postponed, or changed. The major products produced since program inception are also listed for easy reference.

Chico: In a Different Way

1985-86 Objectives and Accomplishments

A. Curriculum Development

1. A curriculum guide was developed except for Mental Retardation and Learning Disability units, as planned.
2. The curriculum guide was field tested at 20 elementary classes as planned.

B. Staff Training

1. Four full-day workshops were held to train 40 teachers to implement the curriculum. Teachers from all elementary schools and one junior high school in the district participated in the training.
2. Support services were provided to 28 teachers who were field testing the curriculum.
3. More than 250 student teachers participated in seminars conducted by project staff.
- 4.* One-hour inservice training for all teachers at each participating school was postponed until the 1986-87 school year.

C. Student Instruction

1. Approximately 1,500 students participated in various aspects of the program, ranging from extensive instruction to a one-hour presentation.

2. Three intervention activities were carried out by the project director, with varying degrees of success, to promote social acceptance of handicapped students by their nonhandicapped peers.

1986-87 Objectives and Accomplishments

A. Curriculum Development

1. The curriculum guide was completed by adding the Learning Disability unit.
2. The curriculum was expanded to the preschool level as well as the secondary level as planned.
3. A videotape of handicapped local people was produced for teacher training purposes.

B. Staff Training

1. Four full-day workshops were held to train 40 teachers to implement the curriculum. All elementary schools in the district have at least one fully trained trainer.
2. A one-hour inservice was provided to 180 teachers in the district as planned.
4. Six secondary teachers were trained as planned.
4. More than 160 student teachers participated in seminars given by project staff.
5. A one-day workshop for county teachers was held as planned but participants were fewer than expected.

C. Student Instruction

1. Approximately 2,300 students participated in the program.
2. Junior and senior high school students (325) were served as planned.
- 3.* Originally planned peer interaction projects in two schools could not be carried out because no school volunteered. Instead, the project director conducted alternative activities to solve problems associated with mainstreaming in selected schools.

Major Products

- A. In a Different Way (Teacher's Guide and lessons for elementary level)
- B. In a Different Way (Teacher's Guide and lessons for secondary level)
- C. In a Different Way for the Young Child (Teacher's Guide for preschool level)
- D. Videotape: "Labels are for Jars" (for teacher training)

Fountain Valley: Speaking From Experience

1985-86 Objectives and Accomplishments

A. Curriculum Development

1. The second grade curriculum and fifth grade curriculum were revised as planned.
2. A videotape "Dream Crafting" was developed and tried out.

B. Staff Training

1. One-hour orientation training was provided to all teaching and administrative personnel (70) at all participating schools.

C. Student Instruction

1. Instruction was planned for 700 students but actually 850 students received instruction.
2. An evaluation of student attitude change was conducted as planned.

1986-87 Objectives and Accomplishments

A. Curriculum Development

1. The primary and middle level curricula were revised as planned.
- 2.* The junior high level curriculum was written but not tried out.
3. Two new videotapes were developed and tried out.

B. Staff Training

1. One-hour orientation training was provided to all teaching and administrative personnel (90) at all participating schools.

C. Student Instruction

1. Instruction was planned for 360 within district students and 360 outside district students, but the program served about 1,100 students, with a majority being outside district students.
2. An evaluation of student attitude change was conducted as planned.

Major Products

- A. Speaking From Experience Curriculum Guide (contains curriculum guides for primary, middle, and junior high levels)
- B. Four videotapes: "Simulation Activities" (for teacher training), "Dream-crafting I, II, III" (for student instruction)

Fresno: Different...But the Same

1985-86 Objectives and Accomplishments

A. Curriculum Development

- 1.* Development of a curriculum guide (K-4) was partially done. Some units were field tested.
2. A 15-minute film on a day in the life of handicapped people was developed as planned.

B. Staff Training

1. No staff training activities were planned.

C. Student Instruction

1. Trained teams of disabled people made presentations to 265 classes (7,400 students) as planned to impart knowledge about the handicapped.
2. Some classroom teachers conducted follow-up activities using the curriculum guide.

1986-87 Objectives and Accomplishments

A. Curriculum Development

1. The curriculum guide was completed as planned.
2. Copies of the program-developed videotape were made to be used in target schools.

B. Staff Training

1. The staff inservice component was developed as planned.
2. Inservice was provided to teaching and administrative personnel at 12 schools.
3. An evaluation of teacher attitude change was conducted as planned.

C. Student Instruction

1. Trained teams of disabled people made presentations to all classes in the 12 target schools (6,800 students) as planned.
2. Some teachers in the 12 target schools carried out follow-up activities using the curriculum guide.

Major Products

- A. Different...But the Same, A Disability Awareness Curriculum (Teacher's guide and activity sheets)
- B. Videotape: "Different...But the Same" (for staff training and student instruction)

Riverside: Project LEAD

1985-86 Objectives and Accomplishments

A. Curriculum Development

1. Project LEAD manuals were printed and assembled as planned.
2. A K-2 component of the curriculum was written as planned.
- 3.* Production of a 30-minute training videotape was postponed until the fall, 1986.

B. Staff Training

1. A trainer workshop plan (dissemination plan) was finalized as planned.
2. Two 2-day training workshops for trainees were held as planned and 40 people attended.
3. One-hour orientation training was provided to 39 teachers and support personnel at two campuses on the experimental site.

C. Student Instruction

- 1.* The program was implemented at the experimental site of a "two-roof" situation, instead of at two experimental and two control schools as originally proposed.
2. Evaluation of the program at the experimental site was conducted as planned.
3. Five trainers implemented Project LEAD at their own districts.

1986-87 Objectives and Accomplishments

A. Curriculum Development

1. The middle school component (Project IMAGINE) was packaged as planned.
2. The Project LEAD manual was refined as planned.
3. The K-2 component of the curriculum was refined as planned.
- 4.* The production of a 30-minute training videotape will be done in August 1987.

B. Staff Training

1. Two dissemination workshops were planned for 80 people but 40 people attended the two Project LEAD workshops. An additional 15 people attended the Project IMAGINE workshop.
2. A half-day workshop was held as planned to refresh individuals who had been trained in 1985-86.

C. Student Instruction

- 1.* Packaging the 1986 evaluation design for use by others was not done because there was no perceived need for it.
2. About 50% of the people who attended the trainers' workshop reported that they were doing or planning to do Project LEAD.
3. Project IMAGINE was implemented at two middle schools.

Major Products

- A. Project LEAD Binder (Coordinator's Guide, Activities Kit, Peer Facilitator's Activity Handbook)
- B. Project IMAGINE Folder (Peer Facilitator Manual, Project IMAGINE)
- C. Two videotapes: one for overview and one for orientation meetings
- D. Slide show for teacher orientation

San Juan: Hand in Hand

1985-86 Objectives and Accomplishments

A. Curriculum Development

1. A curriculum guide developed in 1984-85 was revised as planned.
2. A teacher resource manual was developed as planned.

B. Staff Training

1. Inservice was provided to 50 teachers and support personnel in the target schools as planned.

C. Student Instruction

- 1.* Instruction was provided to 50 classes (1,500 students) instead of the originally planned 60 classes (2,000 students).
2. The program included one private school as planned.
3. Student evaluation was conducted as planned, but guest speaker evaluation was not done as originally planned.
4. A computer game was developed and used for instructional purposes rather than for evaluation purposes as originally planned.

1986-87 Objectives and Accomplishments

A. Curriculum Development

1. The teacher resource manual was refined as planned.

B. Staff Training

1. Five 10-hour inservices were planned but three such inservices were provided. In addition, five shorter workshops were provided to meet

the needs of different audiences more effectively.

- 2.* A planned inservice for the district librarians was postponed to fall, 1987.

C. Student Instruction

1. Instruction was provided to 38 classes (1,069 students) instead of the originally planned 25 classes (750 students).
2. An evaluation of student change was conducted as planned.
3. The computer game was disseminated to all target schools as planned.

Major Products

- A. Hand in Hand Curriculum Guide
- B. Teacher Inservice Guide
- C. Two videotapes: one for program overview and one for instructional use
- D. Disability Awareness Computer Disk

South Bay: ADEPT

1985-86 Objectives and Accomplishments

A. Curriculum Development

1. The curriculum was field tested in six classes and revised based on teacher feedback as planned.
2. Learning stations were maintained in each of the target classrooms as planned.
3. A videotape was produced as planned to give an overview of the program.

B. Staff Training

1. Consultants from the KIDS (Keys to Introducing Disability to Society) project in Berkeley provided training for seven teachers and other curriculum writers.

C. Student Instruction

1. Instruction was provided to 166 students in six classes as planned.
2. Student knowledge was increased from lessons, interviews, and a field trip as planned.
3. Student experience was increased through videotapes, interviews, and a field trip as planned.
4. Student attitude changed as planned through class discussion and interaction with the handicapped.

1986-87 Objectives and Accomplishments

A. Curriculum Development

1. The ADEPT manual was revised and updated as planned.
2. Materials were obtained to maintain expanded learning centers as planned.
3. A videotape was developed as planned to provide in-depth information on the program.
4. A computer notebook and procedures, a set of slides, and a videotape library of speakers were developed.
5. The Peer Tutoring Manual and the Teacher Training Manual were developed.

B. Staff Training

1. Inservice training for teachers was given by the project coordinator, consultants, and previously taught teachers as planned.
2. Participating teachers made a visit to severely handicapped classes.

C. Student Instruction

1. Instruction was provided to 482 students in 12 classes as planned, including the visits to classes for severely handicapped children.
2. Disabled community members were used for classroom presentations and for videotaping sessions as planned.
- 3.* Obtaining help from Chula Vista high school students in videotaping could not be done as originally planned.
4. Peer tutoring activities were carried out by students from four regular classes.
5. An evaluation of student attitude change was conducted as planned.

Major Products

- A. ADEPT Manual (Teacher's Guide, Lessons, Learning Centers)
- B. Project ADEPT Teacher Training Manual
- C. Project ADEPT Peer Tutoring Manual
- D. Computer Notebook (for computer assisted writing activities)
- E. Two videotapes: one for review and one for in-depth information
- F. Videotape library of disabled community people (for classroom use)

Table D-1

Changes in the Percentage of Students Showing Desirable Responses by Program

Item	A (N=146)		B (N=446)		C (N=217)		D (N=130)		E (N=221)		F (N=353)		All (N=1,513)	
	Pre-test	Change	Pre-test	Change	Pre-test	Change	Pre-test	Change	Pre-test	Change	Pre-test	Change	Pre-test	Change
1	45.9	19.2*	26.9	27.4*	22.1	26.7*	32.3	33.1*	13.6	54.8*	35.7	51.8*	28.6	36.7*
2	77.4	4.1	63.0	11.2*	34.1	18.4*	62.3	3.8	42.1	34.4*	64.0	17.3*	57.4	15.7*
3	56.8	14.4*	64.6	8.5	53.0	7.8	72.3	9.2	50.2	26.7*	63.7	24.1*	60.5	15.3*
4	88.4	3.4	75.1	4.9	53.9	18.0*	77.7	10.8*	71.5	15.8*	76.5	13.3*	73.4	10.7*
5**	73.1	2.1	52.9	9.4	35.0	12.9*	67.7	10.8*	48.4	15.4*	61.2	17.3*	54.8	12.0*
6	95.9	0.0	86.1	2.0	86.2	4.6	97.7	-1.5	63.7	5.9	90.6	2.8	88.8	2.6
7**	59.6	-2.7	64.8	1.8	59.0	11.5*	63.1	13.1*	56.1	4.5	60.3	-2.8	61.0	3.0
8	78.8	3.4	71.1	6.3	65.0	0.9	77.7	9.2	60.6	18.6*	77.9	5.4	71.6	7.1
9**	62.1	0.0	50.9	5.2	44.2	7.4	58.5	10.8*	28.1	14.5*	53.0	9.6	48.8	7.9
10	95.9	-5.5	93.7	0.0	88.5	3.2	93.1	4.6	89.1	0.5	93.5	0.6	92.4	0.5
11	91.1	0.0	89.0	-0.2	81.6	2.8	86.2	10.8*	85.5	3.6	85.3	4.8	86.5	2.9
12**	91.0	1.4	91.9	-0.2	88.9	2.8	90.8	0.0	90.0	-0.5	88.7	5.7	90.3	1.7

* Change that is statistically as well as educationally significant.

**For these items, the desirable answer is "Disagree" or "Strongly Disagree."

Items 1, 2, 3 = Knowledge

Items 4, 5, 6 = Acceptance

Items 7, 8, 9 = Attitude

Items 10, 11, 12 = Awareness of Physical Barriers

Table D-2
Changes in the Percentage of Teachers Showing Desirable Responses by Program

Item	A (N=18)		B (N=75)		C (N=6)		D (N=11)		E (N=10)		F (N=15)		All (N=135)	
	Pre-test	Change	Pre-test	Change	Pre-test	Change	Pre-test	Change	Pre-test	Change	Pre-test	Change	Pre-test	Change
1	100.0	0.0	77.3	9.3	50.0	50.0*	100.0	0.0	80.0	20.0*	93.3	6.7	83.0	9.6
2**	88.9	-5.6	58.7	10.7*	83.3	0.0	63.6	18.2*	80.0	0.0	40.0	53.3*	63.7	12.6*
3	72.2	27.8*	94.7	5.3	83.3	16.7*	90.9	9.1	90.0	10.0*	100.0	0.0	91.2	8.8
4**	66.7	5.6	75.0	5.3	83.3	16.7*	81.8	9.1	60.0	40.0*	80.0	6.7	74.3	8.8
5	66.7	16.7*	84.2	7.9	83.3	16.7*	63.6	18.2*	90.0	10.0*	60.0	33.3*	77.9	13.2*
6**	100.0	0.0	96.1	1.3	83.3	16.7*	90.0	9.1	100.0	-10.0	100.0	0.0	96.3	1.5
7	100.0	0.0	97.4	2.6	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	98.5	1.5
8	100.0	0.0	96.1	2.6	100.0	0.0	100.0	0.0	90.0	10.0*	100.0	0.0	97.1	2.2
9**	100.0	0.0	97.4	1.3	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	98.5	0.7
10	-	-	-	Posttest 89.8	-	Posttest 100.0	-	Posttest 95.5	-	Posttest 100.0	-	Posttest 100.0	-	Posttest 92.0
11	-	-	-	90.2	-	100.0	-	100.0	-	90.0	-	100.0	-	92.4
12	-	-	-	73.7	-	100.0	-	81.8	-	90.0	-	95.8	-	78.2
13	-	-	-	59.5	-	100.0	-	83.3	-	60.0	-	90.0	-	68.9

*Change that is statistically as well as educationally significant.

**For these items, the desirable answer is "Disagree" or "Strongly Disagree."

Items 1, 2, 3 = Understanding and Acceptance

Items 4, 5, 6 = Attitude

Items 7, 8, 9 = Awareness of physical barriers

Item 10 = Students became more receptive

Item 11 = Students became more understanding

Item 12 = Students changed attitude

Item 13 = Handicapped improved peer status